

CLAIMS

1. A device for pulling single crystals, comprising a crucible with a support, a heater and at least one heat-insulating screen, characterized in that the heater is made of a starting flexible carbon-bearing material in the form of a cylinder whose ends are fixed between coaxially arranged rigid rings of carbon material that are connected to a power supply, wherein the heater is made so that the wall thereof has its thickness determined from the relationship:

$$\delta \cdot \rho \cdot c = 500 \text{ to } 8500 \text{ J/m}^2 \cdot \text{K}, \text{ where:}$$

δ – heater wall thickness, m;

ρ – density of the material the heater is made of, kg/m³; and

c – specific heat of the material the heater is made of (at working temperature), J/kg.K.

2. The device according to claim 1, characterized in that the rings of carbon material are connected to the power supply through heat-insulating screens.

3. The device according to claim 1 or claim 2, characterized in that a layer of silicon nitride is provided on the heater surface on the inner and/or outer side thereof.

4. The device according to any one of claims 1-3, characterized in that the crucible or the support is made of silicon nitride.

5. The device according to any one of claims 1-3, characterized in that the crucible and the support are made of silicon nitride so as to be integral with one another.

6. The device according to any one of claims 1-5, characterized in that the carbon-bearing material of the heater is further sealed with pyrolytic carbon and/or silicon carbide.

7. The device according to any one of claims 1-6, characterized in that it further comprises a heat-insulator of fabric and/or felt made of silica or quartz fibers.